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## Practicing Sustainability

### Illuminating ‘Use’ in Wearing Clothes

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#### —INTRODUCTION

This article explores examples of creative practices of wearing and maintaining clothes, and is centred around one account of laundering that constructs the commonplace maintenance of clothing as an activity for learning. This account is placed in dialogue with sustainable design research about the transition toward sustainable ways of living such as the development of ‘slow fashion’. For instance, ‘slowness’ leverages time to rethink the value of what we already *do* and *have*, to

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generate alternative temporal patterns, material flows and imaginings that are more attuned with the pace and rhythms of living day by day. With a fashion system that endorses regular updates and short-lived looks, the logic to its renewal is that as clothes are worn they depreciate in value, as the patina of use moves them further away from newness. However, when wearing and maintaining clothes are centrally positioned as everyday practices, the life and meaning that clothes come to have *as* worn can be appreciated as a mass participation in positive value creation. Specifically, it is possible to see this value in terms of practicing sustain-*abilities* and related positive signs of a more sustainable material culture.

As co-writers, our collective aim is to illuminate ‘wearing clothing’ as an outcome of sets of practices related to dressing, that wear a garment in and out over time, including laundering. The article assembles a practice-oriented perspective on sociocultural and technical practices of wearing and aspires to do the conceptual framing to support insightful analysis of everyday micro practices like clothes cleaning, dressing and sorting as a contribution to cultural studies into dressing the body. This work was started by two of the authors in a pair of co-authored articles titled ‘On Wearing’ and ‘Reorienting Sustainable Design’ and is assisted by the third author’s doctoral research about laundering.<sup>1</sup> It is argued elsewhere by Abby Mellick Lopes, Alison Gill and Dena Fam that design research which aims to support sustainable practices, draws from conceptual frameworks and methodologies (like theories of social practice and styles of ethnographic research of the everyday) to ‘interrogate the geographies of the familiar’ in novel ways and conceptualise the making of change.<sup>2</sup>

This interdisciplinary approach to explore the sociocultural contexts of design is continued in this article, specifically in the cultural life of clothes in *use*, research that is necessary to see change made real in the assemblages of material, interactions and conventions that hold everyday practices together. When an alternative view of change is considered, actual change is much harder to substantiate; for instance, the awareness, motivation and intention that it takes to live sustainably are mental qualities that are hard to *see*. Our intention is to underscore cultural-material performances and competencies of sustain-*abilities* already underway in the skills and improvisations of everyday clothing use. Holly Kaye-Smith’s research on laundering explores a slowing practice on the user-side

whose objective is to maintain the value of clothing already in existence. This article's snapshot of laundering performance hopes to leverage opportunities to consider the many tonnes of clothes already in circulation requiring care and at risk of obsolescence by newer industry output. The modest aim of this article is to survey at least a small part of what a practice perspective can help researchers of fashion and dress to *do* with the insights of practitioner-based learning. We aim to better understand the opportunities for transition to sustainability in the spectrum of clothing use.

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—ILLUMINATING USE TIME: FROM DESIGNING SLOWER PRODUCTS TO LENGTHENING USE LIFE

Fashion's rapid time and its regulative force has been historically positioned in relation to modernity as short-lived material and imaginative change by writers such as Thorstein Veblen, Charles Baudelaire and Georg Simmel; as the latter put it, 'fashion increasingly sharpens our sense of the present'.<sup>3</sup> Indeed, ever faster fashion understands 'use' as an increasingly fleeting encounter with the current 'look', with which to fashion the now with fresh replacements that come from a fashion forward direction whereby the 'fashion of tomorrow turns today's fashion into yesterday's fashion'.<sup>4</sup> Cheryl Buckley and Hazel Clark propose there is a need for further critical study on fashion in everyday urban life, in spite of exemplary work on the constitution of fashion in the interdisciplinary field of fashion studies.<sup>5</sup> They argue that aspects of fashion around the ordinary and mundane remain elusive, meaning the life of what Judy Attfield calls 'design in the lower case' escapes notice, wherein items are drawn from a wardrobe in routine individual and collective dressing.<sup>6</sup>

We recommend that a study of practices like wearing has much to offer an understanding of the life of dress as it analyses the sociocultural and technical webs of everyday interaction and use. For us, *wear/ing* is a multimodal concept that is employed to explore recurrent practices such as dressing and underscore the indexes of bodily activity, of use time and the physical markings of use. This multimodality of wear/ing is significant to the article's engagement with the experience of practices, objects and duration that are captured by the family of words—wearing, wear and the worn. To speak of the marks, rubs and soiling of wear refers to the descriptive indices of use, time, relatedness and experience as clothes are 'worn' by bodily dressing and processes of maintenance that wear-in,

wear-down and wear-out their material and aesthetic stuff. The traces marking clothes have much to tell about the practices of which they are a part, and they can tell what practices such as laundering *do* to clothes, and the repetitive removal via washing serves as a measure of the substantial time invested in erasing signs of wear. For instance, the restorative practices involved in maintenance like spot cleaning, washing, drying and ironing involve making clothes ready again for another use by removing explicit indices of use. As we hope wear/ing as a concept produces tangible understanding of the mutuality of practices, objects and time (in daily dressing and dress, wearing and the worn), we allow for the possibility that clothes wear/ing can shape new practices, interactions, and relationships in the everyday.

Sustainable design has for some years considered the 'use phase' a critical fulcrum across which more sustainable practices might be leveraged.<sup>7</sup> Research on slow design and slow fashion has been central in calling for the re-evaluation of consumer relationships with a coercive fast, high volume product turn over and the template of fast consumption and use.<sup>8</sup> According to the tool of life-cycle analysis used in sustainable design, 'use' is conventionally described as a phase in a product's life-cycle from cradle to grave. Life-cycle analysis (LCA), sometimes called cradle-to-grave analysis, measures the environmental impacts of a product's 'life' stages from materials and garment supply (design, manufacture, distribution, retail), to use (use and reuse, maintenance, storage), through to end-of-life (disassembly, reuse, recycling, disposal, landfill). Kirsi Laitala and Casper Boks confirm that most LCAs on clothing show that the use phase is the most energy-demanding period for many garments, and observe that, in spite of these emerging patterns, seminal sustainable design initiatives have attended to making improvements in the materials supply and manufacturing phase of clothing production.<sup>9</sup> The 'use phase' is grasped by design in terms of functional units of service and reference flows, energy use and ergonomics or fit-for-purpose. While this has facilitated incremental innovations such as water or energy efficient design, and dosage control tablets or 'cold wash' detergents to facilitate the ongoing life of textiles, in effect it shifts the spotlight onto consumers and away from the far from negligible impacts of fibre production and manufacture, not to mention the requirements of extended producer responsibility, where producers assume responsibility for managing the waste generated by their

products.<sup>10</sup> Clothing LCAs have confirmed the higher relative contribution of laundering to the energy demands across a garment's lifecycle and indicated the intensity of use time, for example putting the energy cost of laundering as high as 82 per cent of a polyester blouse's overall energy profile.<sup>11</sup> In 'Sustainable Clothing Design: Use Matters', Laitala and Boks argue that research into the use phase matters because it is difficult to evaluate the total effects because significant variables in approaches to maintenance, use habits and garment lifespans.<sup>12</sup> They are persuasive about the need to know more about what is involved in use—the technical and social matters of post-acquisition consumption, such as ownership, maintenance, disposal and calculating the lifespans of clothing—to leverage design opportunities to promote sustainable use.

Kate Fletcher proposes, like many others, that one of the possibilities for increasing clothing's sustainability is to prolong the use time per garment, while developing resourceful and efficient slower use practices.<sup>13</sup> The report 'Valuing Our Clothes' by the UK-based environmental advocacy group WRAP argues that extending the average use life of clothes by just three months of active use per item leads to a 5–10 per cent reduction in each of the carbon, water and waste footprints.<sup>14</sup> Laitala and Boks explain the assumptions behind this common sense proposition of extending use to reduce the impacts of replacement, as follows:

Theoretically, if the use period could be doubled and one garment fewer would be produced, the reduction in the environmental effects from the production and discarding phases could be reduced significantly in both absolute and relative terms. This could be valid under the assumptions that changes in production methods would not increase the environmental burden, that the longer active use of that specific product would prevent another product from being manufactured, and that the longer use period would not increase the environmental effects from repair or additional washing, as well as that there would be no other rebound effects.<sup>15</sup>

As research indicates that the impact of washing on water and energy use is already high, then the notion of an extended life needs to be considered carefully so that the benefits are not cancelled out.

Design strategies for extending product life have been central to the development of ecodesign in a range of product fields and well established by

technically strengthening material durability and fostering enduring use relationships between people and objects by ‘constructing more stable and lasting product identities’.<sup>16</sup> Typical of the industry focus on production, the use phase has mattered most at the front end of the design process, where design decisions vis à vis product lifetime extension ‘lock in’ certain features, like selecting a material that can be recycled or requires dry cleaning only.<sup>17</sup> Like the attachment of care instructions to keep a garment in good shape, these are design strategies that affect environmental impacts incurred in the use phase. In the clothing industry, strategies to prompt the user to reduce throwaway practices include financial incentives to take back used clothing at the end of (first) life as a cash discount on new purchases (for example, Lorna Jane’s ‘Swap Shop’); take back schemes can be variously motivated by waste reduction of textiles going to landfill, donations for reuse and charity, and efforts to ‘close the loop’ on material streams.<sup>18</sup> Consumers are being educated about organic and/or ecologically responsible textile properties and their care to support durability, as well as selecting classic garments as lasting choices that resist fashion change (for example, the 24-piece ‘capsule wardrobe’ by British stylist Gok Wan).<sup>19</sup> Other creative strategies can invite tolerance, as well as long-lasting commitment from users by developing textiles and garment characteristics that can age gracefully with extensive use or accommodate stains (for example, a dress pre-stained with red wine by Lauren Montgomery Devenney); and by constructing more materially and aesthetically durable clothes that come with instructions or a kit so that the user can update and personalise what the designer started (for example, Fletcher & Earley’s ‘Updatable T-shirt’).<sup>20</sup> Most of these are frontend design strategies to technically reconfigure a garment product for an extended lifespan and potentially more enduring use relationships which have affinities with creative strategies in other product fields of sustainable design. These product-centred design initiatives are not practiced in everyday life. If the focus can be deflected away from the development of new but slower moving products (of greater durability, longer wearability and so on), it is possible to see other ways of reconfiguring the time of use and interactions as sustain-*abilities*.

Fletcher’s ‘slow fashion’ research has shown how increased sensitivity to different scenarios, periods and patterns of fashion use can drive fashion design for sustainability and re-evaluate the desirability afforded to the speed of refreshing

new looks.<sup>21</sup> Fletcher would argue that using the tautological term 'fast fashion' is necessary to declare that there are ever faster cycles of manufacture and purchase, of material and symbolic obsolescence, just as it is necessary to use the oxymoron of 'slow fashion' to force a thinking of different speeds of use, and to rethink the broken model of 'McFashion' that maximises the volume of goods by squeezing standards of production and working conditions.<sup>22</sup> It is possible to envisage supporting the fashion impulse to generate new looks at speed with alternative collaborative consumption services like renting or sharing that challenge the governance of retail services selling individually owned, new pieces to be worn a limited number of times. The escalating number of rental services for clothes can potentially extend the active life of any garment by sharing them between many wearers, to accrue more total wears, and reduce the purchase of one-off items for special events that then hang in a wardrobe when others could wear them. It is argued that 'a marketable set of products and services capable of jointly fulfilling a user's needs' and then extended to others, compares favourably with the maintenance cost and environmental impacts of individual ownership, in product service system studies.<sup>23</sup> The principles that people should own fewer clothes which last longer because they embody quality (of product, of working conditions and of resource efficiency) and find ways to share these are central to slow modes of engagement and importing thoughtful use time into activities with fashion.<sup>24</sup>

A long-established mechanism for extending the lives of clothes is the donation of worn pre-loved clothes to charity, or for resale at the 'thrift shop'. The perceived thriftiness of these shops, a once cheaper alternative in the retail market to buying new, has lessened with fast fashion's lowering prices. Donation or re-gifting as a strategy of product life extension works alongside other social systems like swap meets, so called 'second-hand' markets, e-Bay, Gumtree and bags of 'hand-me-downs' to find alternative routes to give clothes second or more lives. Exploring the practices of divestment to the 'second-hand' sector are fundamental to teasing out the timespans, routes and value-shifts of clothing use in 'pass on' culture that promotes a tolerance of extended use and an aesthetic of the worn. It is worth noting that rates of clothing donation in Australia are on the rise, which has been linked to ever-faster fashion change and the illegal use of charity bins as waste dumping points; the problem is the blow-out of material and symbolic sorting-work

required to recover these clothes from the category of post-consumer waste.<sup>25</sup> A 2011 campaign for Oxfam charity clothes stores photographed by Robert Erdmann illuminates the significance of 'vintage' as a symbol of slow engagement with long-life, material and symbolic durability, as select vintage clothing pieces are imbued with the values of classic, period style (that is, enduring aesthetic style).<sup>26</sup> The campaign invites audiences to think of clothes as their partners in making memories, as things to which one becomes emotionally attached, and as recipients of care and admiration. By picturing scenes where a garment has been part of an uplifting experience or magical adventure like boarding a cruise ship bound for the Big Apple in the 1940s, a vintage cream silk dress invites respect for having qualities as object and subject of longevity and the experience of aesthetic style that are imperceptible in fast use. By buying vintage, one can pick up where the previous owner left off, to appreciate it maybe as a partner for far longer than would otherwise have been the case.

—PRACTICING LAUNDRY: A PRACTICE-ORIENTED PERSPECTIVE AND CONCEPTUAL FRAMEWORK

Practice theories suggest it is necessary to better understand the multiplicity of micro practices at play in everyday life in order to understand how societies might become more sustain-able. This article is underpinned by the position that the role of design in mediating and transforming sociocultural practices towards sustainability can be illuminated and supported by research from the social sciences and cultural studies about changeability in everyday life.<sup>27</sup> Integral to our practice perspective is an engagement with the frequently bifurcated domains of material culture studies and the social theory of consumption, between a theorisation of 'practices' (social practice theories) and 'things' (material culture). Interest in research into social practices has grown as an extension of sociology of consumption and science and technology studies (STS) to counter, as Elizabeth Shove et al. and Nicky Gregson et al. argue, an over-emphasis on the theorisation of things as symbolic or material objects without adequate consideration of the way these meanings are held together in the practices that shape sociocultural life, and the way things shape practices.<sup>28</sup> While one of its greatest merits is the focus it brings to the dynamics of everyday life, the significance of researching the minutiae of practices lies in the generation of analyses that share the thick descriptive qualities of



ethnography, including many insights about related activities, often intertwined in practice.<sup>29</sup> After research about speeds of clothing use, it is important to investigate the cultural dynamics and embodiment of wear/ing, to learn to recognise competencies as part of the transition to sustain-*abilities* and how best to support these.

Central to our rationale for a focus on everyday practices is that it has been persistently difficult to see the duration of everyday use and the lifespan of clothes as they live on beyond the present fleeting moment, because of fashion's insistence on the re-fresh of looks. If the promising signs of slow use, and of longer lasting artefacts, are an opportunity for sustainable material culture, then sustainability initiatives must contend with the fashion influence on newness that prefers to see wear/ing and use erased for a garment to be desirable, acceptable and fresh. The very workings of sustainability in slow fashion engagement—as it appropriates things into a temporal register where time is given to practicing care for them—are being undermined by how clothing is understood via normative fashion, and the potential to nurture sustain-abilities are erased along with the disavowal of use time and any signs of wear. When this point is considered in regards to laundering convention, one of the criteria for assessing a garment's wearability is its capacity to sustain intensive cycles that agitate away the signs of use, effectively rendering invisible the experiences of wear/ing and the practices of care.

Sarah Pink, Kerstin Leder Mackley and Roxana Morosanu animate laundering via an ethnographic study of practices as part of ongoing research into the experiences that constitute the environment of urban homes; they call for an interdisciplinary approach in cultural studies to 're-set the scene for understanding the contexts of home in which energy consumption and demand and the environmental and health issues related to indoor laundry drying are *lived*'.<sup>30</sup> Pink interprets laundry and related activities as a tacit, skilled, multisensory practice of making home that includes 'embodied knowing, sensing, ways of doing that are rarely articulated verbally'.<sup>31</sup> Practices like laundering are complex rhythmic entities of actors, processes, materials, competencies and social conventions. They have a certain sociocultural form that takes shape within a designed space and location, and they configure a landscape, or what Andrew Glover calls a topography of practices.<sup>32</sup> Pink's approach to investigating the topography of everyday laundering

practice is offered as a critical alternative to awareness-raising and behaviour change theories currently informing policy initiatives that depend on an Enlightenment model of reasoned action. Practice theories challenge the change agency of 'behaviour' by offering a more nuanced picture of the sociocultural topographies holding everyday life together, in order to understand what *transition* to sustainability looks like.<sup>33</sup> We argue that such an approach is significant for challenging the product-oriented expectations of many design initiatives to change consumer behaviour via more efficient detergents and energy-rated washing machines. When observing the contexts in which design lives, artefacts lose their attachment to ideal identities as 'products' of individual design industries, and become simply part of the furniture. As identified in section one, there are many creative design strategies for extending the use life of garments, and these have been developed within design's technical remit of making functional, legible objects that service the buyer. However, collectively, these strategies represent a problematic expectation placed on green- or eco-designs to steer the consumer to greener practices.<sup>34</sup> From a practice perspective, the risk of failure seems high for those interventions designed to prompt consumers to be greener based on a limited interpretation of behaviours, for social behaviours are the outcome of practiced integration—they are difficult to mediate with any specificity as they must be practiced in living contexts of everyday life.

Given that the effects of laundering are considered significant to the substantial environmental impacts of clothing use in a lifecycle (vis à vis using energy, water, and generating waste), research on laundering of clothing has illustrated the importance of modifying individual use patterns to launder less.<sup>35</sup> Various studies highlight the complexity of shifting the sociotechnical system of laundering along with social perceptions of cleanliness, and challenging the constitution of a system that privileges individual ownership of white goods with built-in labour-saving features for convenience and assistance with repetitive tasks. Laitala and Boks investigate consumer willingness and experiences with changing laundering practices, particularly by reducing the frequency of washing by wearing clothes longer.<sup>36</sup> Fletcher acknowledges the need to shift the expectations that people have about changing their clothes and washing unnecessarily, citing research that states only 7.5 per cent of laundry qualifies as heavily soiled.<sup>37</sup> In order to reduce

inefficient washing habits whereby clothes are washed because they are between wears or not put away, regardless of how dirty they are, Fletcher identifies that this means working with 'habits, values and basic assumptions about laundering as well as with fabric composition and washing machines'; transition involves challenging 'interconnections between product, process and culture'.<sup>38</sup> Like Fletcher, several studies indicate a role for designers in steering people's laundering through materials choice like washless fabrics and garment design. Many propose that the wider adoption of non-machine cleaning alternatives such as spot cleaning, airing, stain removal and steaming could reduce the frequency of washing.<sup>39</sup> A practice theory lens enables certain questions to be shaped, such as: How are particular unsustainable laundering practices held in place by the current configurations of existing elements of practice such as materials (machines, programmable machine cycles, water and energy suppliers, detergents), routines, work-flows, responsibilities, perceptions and conventions of cleanliness? What happens when one element shifts or is even taken out of the practice picture: for example, machine washing?

—CHANGING THE WAY WE 'DO' CLEAN; MEDIATING CLOTHES LAUNDERING

The following explains how Holly Kaye-Smith constructed a media space for learning about laundering. It begins with a statement from Kaye-Smith where she outlines her research objectives as a doctoral student of communication-design in which she produces media works to generate conversation and connect with an audience of launderers. She aims to engage audiences about the frequency of machine washing and whether it is possible to break the habits of washing clothes too much by investigating and sharing no-wash alternatives.

Our collective aim is to demonstrate the potential of a practice-oriented analysis in Kaye-Smith's research to explore the mechanisms of reproduction and changeability in laundering, and to interpret evidence of sustainable practices in the spectrum of clothing use. Importantly, we analyse the opportunity afforded by this research to reconceptualise short-lived values related to refreshing new (unworn) looks, and reconfigure associated practices of wearing and maintenance by importing time into the value creation of sustain-*abilities* and making change.

*Research design: objectives and methods*

I am a communications-design/media student who initiates conversations with people about laundering clothes and produces media prototypes about these to share with launderers. With research indicating that 92.5 per cent of the clothes that are washed aren't considered heavily soiled, I hope to generate discussion about why and how people wash, and the resource intensity of unnecessary laundering.<sup>40</sup> My aim is to generate community insights about alternatives to regular machine washing and drying, and engage a broader audience than that captured by academic research about laundry. My research approach seeks to be human-centred to counter the already substantial product-centred promotion of ecofriendly consumables like detergents and the perils of consuming further green products as a solution to waste and resource depletion. I have witnessed the development of a throwaway sensibility with the escalation of cheap or value clothing chains that is very different from the relationships my mother's generation maintained with clothes. Today, up to 30 per cent of clothes end up in landfill.<sup>41</sup>

I put my own habits under scrutiny and I started airing my clothes, and using shower steam, rather than washing them as frequently. As a habitual everyday practice, the impacts of laundering are largely imperceptible as there is an inconspicuous consumption of energy and water when washing clothes. Also, according to Shove, there are the harmful effects of micro synthetic fibres in wastewater entering the food chain.<sup>42</sup> That water and energy resources are inconspicuous, in addition to the inconspicuous machine-work invested in making laundering labour-saving is a rationale for why the impacts of the use phase are often underestimated, relative to other phases of a lifecycle. My starting point was auto-ethnographic as I examined the intensity of cycles of wearing, soiling and cleaning my clothes and I tested on myself any reasons to wash each item. Laundry research has told me that 'four in ten would "seriously consider" wearing more clothes a second time before washing, especially young people. The greatest influence is odour—nearly half would do so "if my clothes smelt fresher for longer".'<sup>43</sup>

With my cue being body odour (BO), I developed a sniff test to pick up on the frequent whiffs, speaking colloquially, that I take of my clothes to decide if they really need to be washed or could go-another-wear. I developed a sniffing board with samples of my clothes—used for work, exercise and socialising—that had been worn and soiled and then refreshed by:

- airing on the line and hanging in the sun
- squirting with lemon juice
- shower steam
- spot cleaning using a spot cleaner product and hand soap.

These were called ‘refreshing techniques’ that could meet a variety of cleaning scenarios (depending on access to an outdoor line or shower and so on) and the emphasis was on simple practices of freshening rather than on water-, energy- and materials-intensive machine cleaning.

I recruited people to engage with the samples—to sniff, observe and touch them—to chat to me about their perceptions, and consider these alternative techniques.<sup>44</sup> My tools were fairly rudimentary as I held a placard with the samples stapled to it, and I invited people using a megaphone to ‘sniff my pits for the planet’. Figure 1 illustrates the tools that were used to recruit ‘sniffers’. I filmed these interactions as well as assessing people’s willingness to engage. While my use of a megaphone may be perceived by some as intrusive and for many linked to protest or activism, I felt the need for a performative dimension to open up public discussion about a very mundane subject of laundering. To launch discussion, to get people talking about inconspicuous domestic work conducted behind closed doors, by opening up about my own sniffing habits, guerilla-style public performance seemed necessary. A short video called *The Sniff Test* was made of these conversations to show in focus groups and screen online, with the intention of generating further discussion about laundering, people’s preferences and the feasibility of alternative techniques being routinely applied.<sup>45</sup> The narrative structure of the video combines scenes of my own clothes wearing, soiling, and testing of each technique, with the public performance and audience discussion



Figure 1. Holly Kaye-Smith employs a sample board and a megaphone to recruit participants during the filming of *The Sniff Test*

Source: Still image from video at 1.33 minutes. Reproduced courtesy Holly Kaye-Smith



Figure 2. Kaye-Smith with sample board and a participant on a bus during the filming of *The Sniff Test*

Source: Still image from video at 4.35 minutes. Reproduced courtesy Holly Kaye-Smith

about the samples. Focus group participants were invited to trial a technique that interested them and self-nominate to do a 'think aloud' as I observed their experiences while performing it. The objective was for me to observe and discuss the competencies developed with the technique and any obstacles encountered in its application, and moreover, involve audiences as participants rather than merely observers.

Kaye-Smith's ambition is that her media work primes for sharing practice insights and constructs a space to experiment with alternative ways of doing laundry. As she interacted with 'sniffers' who were recruited at a market and on a bus, she was able to observe their responses to the look, feel and smell of worn clothing and discuss how particular smells or effects of cleaning were produced. Her conversations with the first participant group broached aspects of wash frequency and 'how' people washed their clothes, and while there was less time to discuss the specifics of 'why' people washed, some participants remarked when they were familiar with these techniques, or had used something like them before. Figure 2 shows Holly talking with one participant on a bus about their use of shower steam to clean clothes in order to save money on a laundromat wash.

Indicated by the ease of recruitment, the sniff test was something people related to as a touch point that is frequently used to check the freshness of clothes, allowing participants to know how to respond to samples even if it was to sniff somebody else's clothes. In focus groups, after viewing *The Sniff Test*, discussion repeatedly flared up around sniffing and it was found that the personal sniff test was an important moment in a (un)dressing routine when people decide the frequency of wash. This test enacts the convention that cleanliness, as Shove and others show us, is socially as well as symbolically necessary.<sup>46</sup> Not only are people conditioned to feel good when clothes are fresh, 'nice and crisp and perfectly in shape', the capacity to restore things to freshness is an index of social acceptance, happiness and success; grades of well-laundered clothes exist on an expressive continuum of order, competence, carefulness and self-respect, just as foul smelling or stained clothing is a sign of disorder, deterioration, offense or failure.<sup>47</sup> As Cowan suggests in her reference to the 'senseless tyranny of the spotless shirt', laundering is a practice of social responsibility that sanctions the servicing of a 'need' to be clean, an

intolerance to dirt and the repeat investment of time.<sup>48</sup> The sniff test is a touch point for reproducing or reducing the imperceptible costs of clean—at the very least, the inconspicuous consumption of time, energy, chemicals and water. It was an effective cue to focus group discussion about practices and sorting decisions—that is, what are the signs of too much use in the way of odour, marks, dirt? When and why do I decide to put clothes in the laundry basket? Do I use my laundry basket to get half-used clothes off the floor, because I don't have a place to put clothes that can be worn again? Participants showed interest in a practice like steaming clothes while showering or line-airing that could extend clothes to another wear because they could be supported by already available equipment like a clothesline, rack, hanger and related cleaning activities in a kitchen or bathroom. During discussion it was possible to insert consideration of the alternative 'freshening' techniques that use sunlight, air and steam to bleach marks, release and dissolve smells, and achieve the effects of cleaning. When approached from the launderer's perspective, it was possible to perceive how incremental changes to maintaining one or two items usually washed frequently, might impact on the size of a machine 'load' and reduce frequency of washing.

The discussions reveal that laundering practices not only have historical trajectories that research can trace to investigate change, they also have spatial pathways and routes that reveal practice relationships. Urban laundering belongs to the connective tissue of routine flows, that move through spaces in a house or apartment—wardrobes, storage, bedrooms, bathrooms, laundry, cubicles—both indoor and outdoor, and divide up time with rhythms and categories such as personal, pre- or post-work, recreation and housework. Also illuminated are laundering's relationship to other bodily practices such as dressing (for example, selection and type of clothes and activities), sorting (for example, put away, on a scale of clean and dirty; half-worn, 'to-be-worn-again' and so on), wearing (for example, period of use), showering and cleaning other artefacts. Importantly, amid these webs and flows, artefacts lose their identities as 'products' of a specific design industry like sportswear or high-end fashion, and artefacts are reconfigured during use with a variety of utilitarian and subjective experiences. A dress becomes the dress in which someone loves to dance, a top becomes a magnet that attracts sauce stains, a pair of jeans becomes worn with holes for memories, in the sense that they



can be said to have 'lives' and identities alongside and with other living things. At the very least, there is an opportunity and, perhaps, responsibility, to consider the relationship(s) the garments have to us in these living contexts.

In contrast to a product-oriented design perspective, Kaye-Smith's focus is not on the development of new products to assist in reducing laundering footprints, but instead to work with 'what's in the cupboard' such as using equipment like clotheslines, coat hangers, airing racks, lemon juice and shower steam, that people already have. Her interest is in the artefacture that already exists in homes to support a spectrum of human-scale domestic practices—cleaning, cooking, washing—and the techniques and any small modifications that sustain and extend the already made in use. The generation of modest techniques can be understood as outcomes of daily improvisory activities and alternative rhythms of people as they go about their everyday lives. This capacity to develop small work-arounds to existing practices, to establish and modify tools and routines, can be appreciated as everyday amateur designing, as social practice theorists have argued.<sup>49</sup> In *Design By Use*, authors Uta Brandes et al. have documented remarkably modest examples of unintentional and everyday designing, and by noticing them, this collection frames and invites consideration of 'making' on the user side of design.<sup>50</sup> They include a range of creative acts that are not always the result of conscious decisions to reinvent use and yet may effect changes in resource and energy use. Tim Ingold reminds us 'we are accustomed to thinking of making as a project', an undertaking with 'an idea in mind, of what we want to achieve'.<sup>51</sup> He proposes that there is another way to think of making as a 'process of *growth*' which is aligned with Kaye-Smith's disposition to making with what's already there, where 'the maker from the outset [is] ... a participant amongst a world of active materials'.<sup>52</sup> This view of making can be positioned as an intervention 'in worldly processes that are already going on' rather than imposing an object, as a design solution on a 'world that is ready and waiting to receive them'.<sup>53</sup> It is akin to improvisation; spontaneous, intuitive inventiveness that leverages off what is already there and ways of doing. Kaye-Smith's research illuminates the potential to make and/or break what Shove et al. call 'proto-practices', routine practices and conventions in practice contexts.<sup>54</sup> That is, to observe how proto-practices might be fortified by adjustments to work flows and tools and equipment; as they are not necessarily unpracticed but rather

comprised of elements that are not sufficiently integrated to be widespread or common practice. This research highlights an opportunity to understand change made 'real' in the dispositions, competencies and satisfaction that arise at the level of adjustments to social practices.

Kaye-Smith's research finds evidence of change-ability, people who have implemented these alternative practices and are willing to support less machine washing in their practice. She models how techniques are deployed in test scenarios based on minor reconfigurations of normal standards and conventions as she trials Dombek-Keith and Loker's recommendation to loosen the meaning of clean.<sup>55</sup> Her refreshing techniques leverage off the consensus that washing clothes today is about removing odour, visible traces of dirt and recovering freshness, rather than, say, boiling to get rid of bacteria, as in days of old.<sup>56</sup> As lower water temperatures have been more widely adopted, the 'low dose', 'cold wash' cleaning agents are marketed as efficient cleaners of dirt, germs and bacteria because they use surfactants, builders, enzymes, scents and anti-deposition agents among others, and with capabilities to replace higher water temperatures because they *dislodge* dirt, *build* order and *smooth* fibres.<sup>57</sup> Kaye-Smith's techniques substitute these chemical 'agents of clean' with readily available properties and common beliefs such as the 'power of sunlight' to clean/heat/heal, a freshening air-flow, and the moistening capacity of steam to soften wrinkles, which all require less force than trying to convince that the bacteria don't require killing by powerful enzymes that 'fight'. These refreshing practices are modest reconfigurations of a related topography of normal cleaning care and value-creating practices, about steam, sunlight, air, lemon juice, soap and spot cleaning. However, they do not intend to strip, bleach, smooth or agitate fabrics back to pristine life, and instead try to circumvent the frequency of 'machine hardware' and replace 'hard' laundering techniques with gentler ones. In addition to getting a couple of extra wears in between washes, these techniques aim to buy clothing's textiles and seams a longer life by reducing the wear and tear of machine washing and drying, or inadvertent damage (such as stretching, shrinkage, changes in texture and fading). The new narrative about wear/ing and making clean that Kaye-Smith models in her video and conversations is a disposition to caring for and sustaining material artefacts as a recursive cultural practice, an alternative expression of freshening that is not too radical or far away from normal conventions

and routines of laundering. It offers a rare invitation to share the insights of wear/ing and explore the generation of utility, needs, wants and values such as fresh, clean, worn-in, worn-out, creativity and resourcefulness, in the practice contexts of experience, preferences, material infrastructures, meanings and existing techniques.

As the freshening techniques represent deviations within the sociotechnical landscape of preferred ways of doing, participants have expressed resistance to these alternatives, such as a preference for specific cleaning products or the agitational power of machine washing that are held in place in part by the meaning of clean. For instance, there have been reservations about steam and vapour as an effective cleaner and de-scenter, an honest, sustained cleaner like water and detergent. Also, a practice like cleaning with lemon juice has been perceived as more intensive restoration work and giving more individual attention to one single garment's repair, than the spray application of stain remover and then including in a load of washing. However, one answer is that the work may fit into a pattern of preparing a particular favoured or high-use piece for a special event, while meeting anticipated reductions in machine-washing frequency. Part of the value in generating discussion about laundering is to bring into focus the use time involved, for instance the time taken to hang a machine load of washing on the line to dry. The biggest significant deterrent and persistent obstacle to the alternatives is the routine integration of the services of white-goods and products, and the perceived compatibility between labour- and time-saving appliances and people's daily lifestyle flows, supported by the infrastructural supply of energy and water (including discounts at non-peak times) built up around them.<sup>58</sup> It must be noted that without any further interventions into the supply and individual ownership of machine hardware and laundry infrastructure in the home, any efficiencies and resource savings of washing one garment less may be offset by the use of a machine for the load in which that garment would be washed regardless. These observations confirm the need to insistently disrupt existing flows of dirty clothes going to machines with the intervention of new preferences and conveniences like steaming clothes while showering, or hanging half-used clothes to air. Supporting the emergence of such practices would interrupt routine patterns of care that deal with stocks of clothes to challenge the viability of a machine load.

## —CONCLUSION

This article has considered research that aims to loosen the grip of frequent resource-intense laundering, through conversations with people about laundering as a changeable practice. This research, inflected by theories of practice, brings a special attention to micro, material details and habits that effect incorporation into patterns and tacit routines of ordinary practice, and which risk being overlooked in design initiatives to produce new slower or greener things. One of the more obvious benefits of a focus on the ordinary is that it demythologises sustainability by locating it in everyday life: in practice we do not ‘save power’ by ‘buying energy saving devices’ to ‘mitigate against climate change’, rather we simply wash and clean, often in between attending to other things.<sup>59</sup> The value of the commonplace, afforded by our perspective on practices, is in seeing behaviour enmeshed in everyday life with artefacts; it is here where opportunities for change arise. We have shown that the use phase is maligned in technical studies of resource use. However it is possible to generate new narratives of use time, of existing practice and potential competencies, called *sustain-abilities*. Wearing and maintaining clothes can be appreciated as a mass performance of positive value creation that exceeds the short-lived values endorsed by the fashion system. We claim that use time, as not merely humdrum but a period of intensive engagement in which clothes are worn and washed, holds the key to practicing sustainability.

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—NOTES

<sup>1</sup> Alison Gill and Abby Mellick Lopes, 'On Wearing: A Critical Framework for Valuing Design's Already Made', *Design and Culture*, vol. 3, no. 3, 2011, pp. 307–28; Abby Mellick Lopes and Alison Gill, 'Reorienting Sustainable Design: Practice Theory and Aspirational Conceptions of Use', *Journal of Design Research*, vol. 13, no. 3, 2015, p. 250; Holly Kaye-Smith, 'Mediating Social Change: Changing the Way We Do Laundry Through Media Making', ongoing doctoral research under the supervision of Alison Gill and Abby Mellick Lopes at Western Sydney University, 2012–2016.

<sup>2</sup> Maria Kaika quoted in Abby Mellick Lopes, Alison Gill and Dena Fam, 'Editorial', *Journal of Design Research*, vol. 13, no. 2, 2015, pp. 237–47.

<sup>3</sup> See Thorstein B. Veblen, *The Theory of the Leisure Class*, Macmillan, New York, 1899; George Simmel, 'Fashion', *International Quarterly*, vol. 10, 1904, pp. 130–55; and Charles Baudelaire, *Baudelaire: Selected Writings on Art and Artists*, trans. P. E. Charvet, Cambridge University Press, Cambridge, 1972; Simmel quoted in Michael Sheringham, *Everyday Life: Theories and Practices from Surrealism to the Present*, Oxford University Press, Oxford, 2006, p. 181.

<sup>4</sup> Barbara Vinken, *Fashion Zeitgeist: Trends and Cycles in the Fashion System*, trans. M. Hewson, Berg, Oxford and New York, 2005, p. 143.

<sup>5</sup> Cheryl Buckley and Hazel Clark, 'Conceptualising Fashion in Everyday Lives', *Design Issues*, vol. 28, no. 4, 2012, pp. 18–28.

<sup>6</sup> Judy Attfield quoted in Buckley and Clark, p. 19.

<sup>7</sup> See Mellick Lopes and Gill, p. 250.

<sup>8</sup> The article draws on influential research on 'slow fashion': Kate Fletcher, *Sustainable Fashion and Textiles: Design Journeys*, Earthscan, London, 2008; Kate Fletcher, 'Post-Growth Fashion and the Craft of Users', in Alison Gwilt and Timo Rissanen (eds), *Shaping Sustainable Fashion: Changing the Way We Make and Use Clothes* pp. 165–75, Earthscan, London, 2011; Anne Theresia Wanders, *Slow Fashion*,

Verlag Niggli, Zurich, 2009; Kirsi Laitala and Casper Boks, 'Sustainable Clothing Design: Use Matters', *Journal of Design Research*, vol. 10, nos 1–2, 2012, pp. 121–39; Kate Fletcher and Lynda Grose, *Fashion and Sustainability: Design for Change*, Laurence King, London, 2012.

<sup>9</sup> Laitala and Boks, pp. 121–39.

<sup>10</sup> Fletcher, *Sustainable Fashion and Textiles*, pp. 77–8, p. 171. An influential 1990 LCA study for the sustainable textiles debate was on a polyester blouse, whose highest impact when washed every second wear was shown to be in use rather than manufacture, and therefore the headline results of this study were used by synthetic fibre manufacturers to turn attention away from themselves towards consumers.

<sup>11</sup> Fletcher, *Sustainable Fashion and Textiles*, p. 77–8.

<sup>12</sup> Laitala and Boks, p. 123.

<sup>13</sup> Fletcher, *Sustainable Fashion and Textiles* and 'Post-Growth Fashion'; Wanders; Laitala and Boks.

<sup>14</sup> WRAP (*Waste and Resources Action Program*), 'Valuing our Clothes: The True Cost of How We Design, Use and Dispose of Clothing in the UK', 2011, p. 3, <<http://www.wrap.org.uk/sites/files/wrap/VoC%20FINAL%20online%202012%2007%2011.pdf>>.

<sup>15</sup> Laitala and Boks, p. 124.

<sup>16</sup> Ezio Manzini, 'Prometheus of the Everyday', in Richard Buchanan and Victor Margolin (eds), *Discovering Design: Explorations in Design Studies*, University of Chicago Press, Chicago, 1995, p. 223. See Tim Cooper (ed.), *Longer Lasting Products: Alternatives to the Throwaway Society*, Gower, Farnham, UK, 2010, for an overview of research contributions in product lifetime extension; see Jonathan Chapman, *Emotionally Durable Design: Objects, Experiences and Empathy*, Earthscan, London, 2005, for an approach to the practical application of psychological and symbolic stimuli to produce 'emotional durability' and affordances in design.

<sup>17</sup> Mellick Lopes and Gill, p. 249, cite Lewis and Gertsakis's reference to the 'lock in' of features during the design stage.

<sup>18</sup> 'Swap Shop' at Lorna Jane is a cash incentive donation program rather than a swap, <<http://www.lornajane.com.au/community/swap-shop>>.

<sup>19</sup> Gok Wan, 'This Morning', *The ITV Hub*, 10 Feb 2015, <<http://www.itv.com/thismorning/style-beauty/fashion-gok-wan-creates-your-capsule-wardrobe>>. Wan advises the capsule wardrobe strategy is to cull and select fewer but higher quality clothes that last longer, to end the 'disposable clothing days'.

<sup>20</sup> Montgomery Deveney's pre-stained dress is in Fletcher, *Sustainable Fashion and Textiles*, pp. 87–91; Kate Fletcher and Becky Earley, '5ways', 2002–3, <<http://www.5ways.info/docs/intro/intro.htm>>, the 'updatable t-shirt' is a prototype for a modifiable clothing system that is potentially more resistant to fashion obsolescence; also, more eco-labelling at retail points is encouraging greener care of textiles (for appropriate care of garments designed for reduced wash and to limit garment damage). For example, Nudie Jeans advocate limited and preferably no washing for a lengthy period of wearing-in

denim.

<sup>21</sup> Fletcher, *Sustainable Fashion and Textiles*, pp. 161–83.

<sup>22</sup> ‘McFashion’ is Lee cited in Laitala and Boks, p. 127. In *Sustainable Fashion and Textiles*, p. 162, Fletcher points out that fast fashion garments are no quicker to make than any other garment but it is the working conditions, the number and wages of workers in ‘low-cost’ countries, that are all squeezed to meet profit targets.

<sup>23</sup> Nicola Morelli, ‘Designing Product Service Systems: A Methodological Exploration’, *Design Issues*, vol. 18, no. 3, 2002, p. 4. See Ezio Manzini and Carlo Vezzoli, ‘Product-Service Systems and Sustainability: Opportunities for Sustainable Solutions’, nd, United Nations Environmental Program, <<http://www.unep.org/resourceefficiency/Portals/24147/scp/design/pdf/pss-imp-7.pdf>>.

<sup>24</sup> ‘Around 30% of clothes in the household wardrobe typically have been unused for at least a year—worth over £1,000 per household or £30 billion across the UK. Most often, clothes are unused because they no longer fit.’ *WRAP*, p. 5. Like the WRAP report, we consider this an indication of missed opportunities to share, reuse and regift this material to reduce new purchases.

<sup>25</sup> Following the Australian Red Cross’s 2013 campaign titled ‘Not Happy with Santa’s Gift. Don’t Ditch It, Re-gift It to Red Cross Stores’, the organisation noted a rise in donations by 2,500 kilograms per month at many stores, <<http://www.avantcard.com.au/results/red-cross/>>.

<sup>26</sup> ‘I Made Waves On My Way to the Big Apple’, January 2011, print and TV campaign, RKCR/Y&R London, <<http://www.oxfam.org.uk/shop/vintage/vintage-story>>. Print campaign for *Vogue*, *Elle*, *Tatler*, *Harpers Bazaar*, *Marie Claire* and *Glamour*.

<sup>27</sup> This article’s conceptual work draws on theories of social practice which are developed in Elizabeth Shove, Mathew Watson, Martin Hand and Jack Ingram, *The Design of Everyday Life*, Berg, Oxford and New York, 2007; and Elizabeth Shove, Mika Pantzar and Matt Watson, *The Dynamics of Social Practice: Everyday Life and How it Changes*, Sage, Los Angeles, London, New Delhi, Singapore, Washington DC, 2012. Reviews of the now significant body of literature that shares an interest in ‘practice theories’ about the changeability of practices for sustainable design, can be found in Ida Pettersen, Casper Boks and Arnold Tukker, ‘Framing the Role of Design in Transformation of Consumption Practices: Beyond the Designer-Product-User Triad’, *International Journal of Technology Management*, vol. 63, nos 1–2, 2013, pp. 71–103; and Mellick Lopes et al., ‘Editorial’.

<sup>28</sup> Shove et al., *The Design of Everyday Life*, pp. 5–7; and Nicky Gregson, Alan Metcalfe and Louise Crewe, ‘Practices of Object Maintenance and Repair: How Consumers Attend to Objects Within the Home’, *Journal of Consumer Culture*, vol. 9, no. 2, pp. 248–72.

<sup>29</sup> Clifford Geertz, ‘Thick Description: Toward An Interpretive Theory of Culture’, in his *The Interpretation of Cultures*, Basic Books, New York, 1973.

<sup>30</sup> Sarah Pink, Kerstin Leder Mackley and Roxana Morosanu, ‘Hanging Out At Home: Laundry as a Thread and Texture of Everyday Life’, *International Journal of Cultural Studies*, vol. 18, no. 2, 2015, p. 212.

- <sup>31</sup> Sarah Pink, *Situating Everyday Life: Practices and Places*, Sage, London, 2012, pp. 70–1.
- <sup>32</sup> Andrew Glover, 'Characterising Elements of Practice: The Contours of Altruistic Material Divestment', *Journal of Design Research*, vol. 13, no. 3, 2015, pp. 265–7.
- <sup>33</sup> Mellick Lopes et al., 'Editorial', 2015, p. 237.
- <sup>34</sup> Mellick Lopes and Gill, p. 251.
- <sup>35</sup> See Elizabeth Shove, *Comfort, Cleanliness and Convenience: The Social Organization of Normality*, Berg, Oxford, 2003; Laitala and Boks; Kathleen Dombek-Keith and Suzanne Loker, 'Sustainable Clothing Care By Design', in Alison Gwilt and Timo Rissanen (eds), *Shaping Sustainable Fashion: Changing the Way We Make and Use Clothes*, Earthscan, London, 2011, pp. 101–16; Pettersen et al., 'Framing the Role of Design in Transformation of Consumption Practices', pp. 71–103.
- <sup>36</sup> Laitala and Boks, p. 123.
- <sup>37</sup> Catton quoted in Fletcher, *Sustainable Fashion and Textiles*, p. 86.
- <sup>38</sup> Fletcher, *Sustainable Fashion and Textiles*, p. 86.
- <sup>39</sup> Dombek-Keith and Loker suggest spot cleaning and airing clothes; Pettersen et al. recommend stain removal, spot cleaning and steaming.
- <sup>40</sup> Catton quoted in Fletcher, *Sustainable Fashion and Textiles*, p. 86.
- <sup>41</sup> WRAP, p. 32.
- <sup>42</sup> Shove. Shove's theory that routine consumption of water and energy via practices like laundering are inconspicuous is supported by an Australian study by Patrick Troy and Bill Randolph, 'Water Consumption and the Built Environment: A Social and Behavioural Analysis', June 2006, *City Futures Research Centre Research Paper 5*, University of NSW, <<http://www.fbe.unsw.edu.au/cityfutures/publications/researchpapers/researchpaper5.pdf>>. The report indicates a vast discrepancy between the perception of water used in cleaning and actual water used. It identified an average domestic laundering scenario of washing clothes 4.2 times per week in individually owned washing machines, with the share of domestic water usage estimated at 16 per cent.
- <sup>43</sup> WRAP, p. 32.
- <sup>44</sup> Human Research Ethics approved protocol is H10111 for 'Think Fast, Slow Fashion: How the Medium and Practice of Documentary Film Making Can Support More Sustainable Fashion Futures'.
- <sup>45</sup> Holly Kaye-Smith, *The Sniff Test*, 2015, <<https://www.youtube.com/watch?v=uS74tygr2gU>>.
- <sup>46</sup> Shove.
- <sup>47</sup> Shove, p. 149.
- <sup>48</sup> Ruth Cowan quoted in Shove, p. 126.
- <sup>49</sup> Shove et al., *The Design of Everyday Life*.
- <sup>50</sup> Uta Brandes, Sonja Stich, and Miriam Wender, *Design by Use: The Everyday Metamorphosis of Things*, Birkhauser, Basel, Boston, 2009.
- <sup>51</sup> Tim Ingold, *Making: Anthropology, Archeology, Art and Architecture*, Routledge, London, 2013, p. 20.



<sup>52</sup> Ibid., p. 21.

<sup>53</sup> Ibid.

<sup>54</sup> Shove et al., *The Dynamics of Social Practice*, p. 24.

<sup>55</sup> Dombek-Keith and Loker.

<sup>56</sup> Pettersen, et al., p. 89.

<sup>57</sup> 'Washwise', *ACCORD*, nd,

<[http://www.washwise.org.au/\\_documents/Laundry%20detergent%20ingredients%20info%20sheet.pdf](http://www.washwise.org.au/_documents/Laundry%20detergent%20ingredients%20info%20sheet.pdf)>. Washwise is an initiative of ACCORD, an Australian national industry association representing manufacturers and marketers for 'cosmetic, hygiene, and specialty products'.

<sup>58</sup> Pettersen, et al., p. 89.

<sup>59</sup> Mellick Lopes et al., p. 245.

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